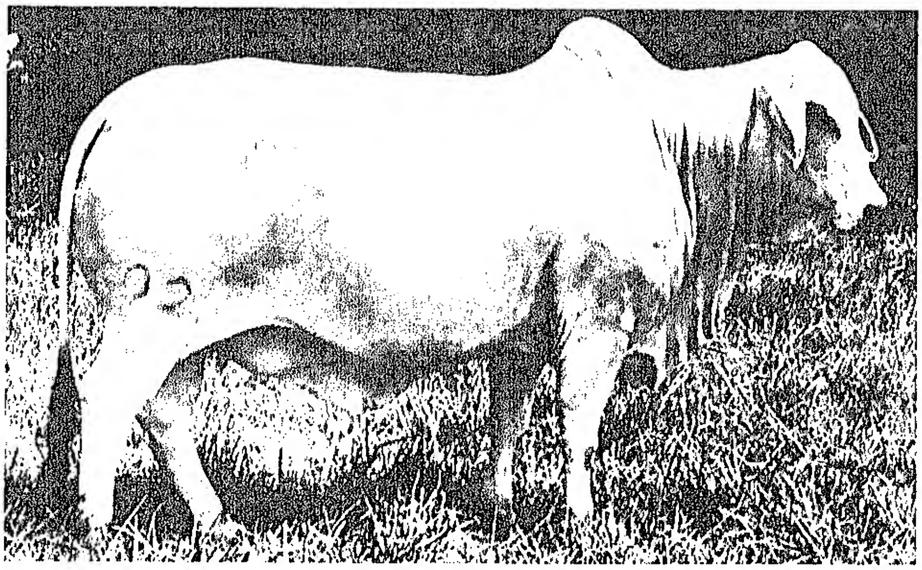
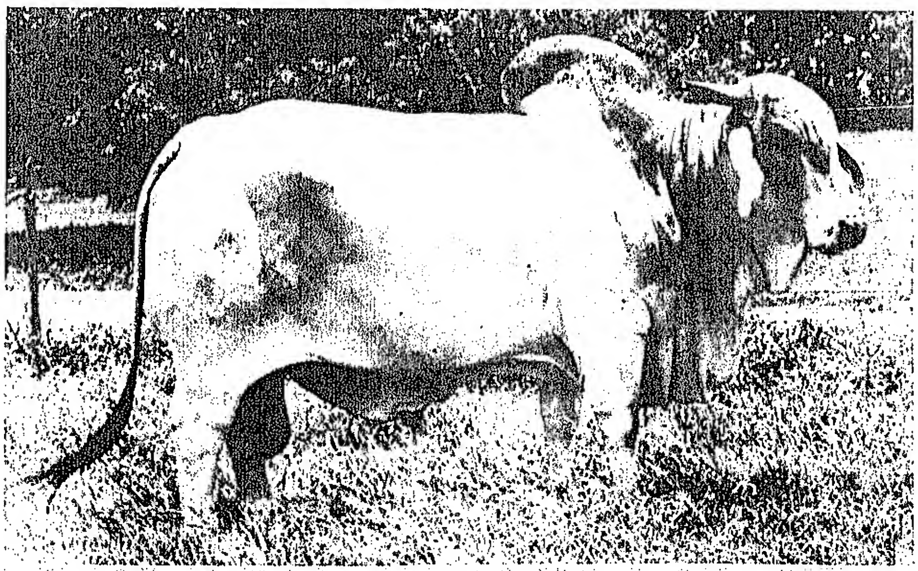
FAS-M 208 Revised July 1973

the beef cattle industries of Central America and Panama





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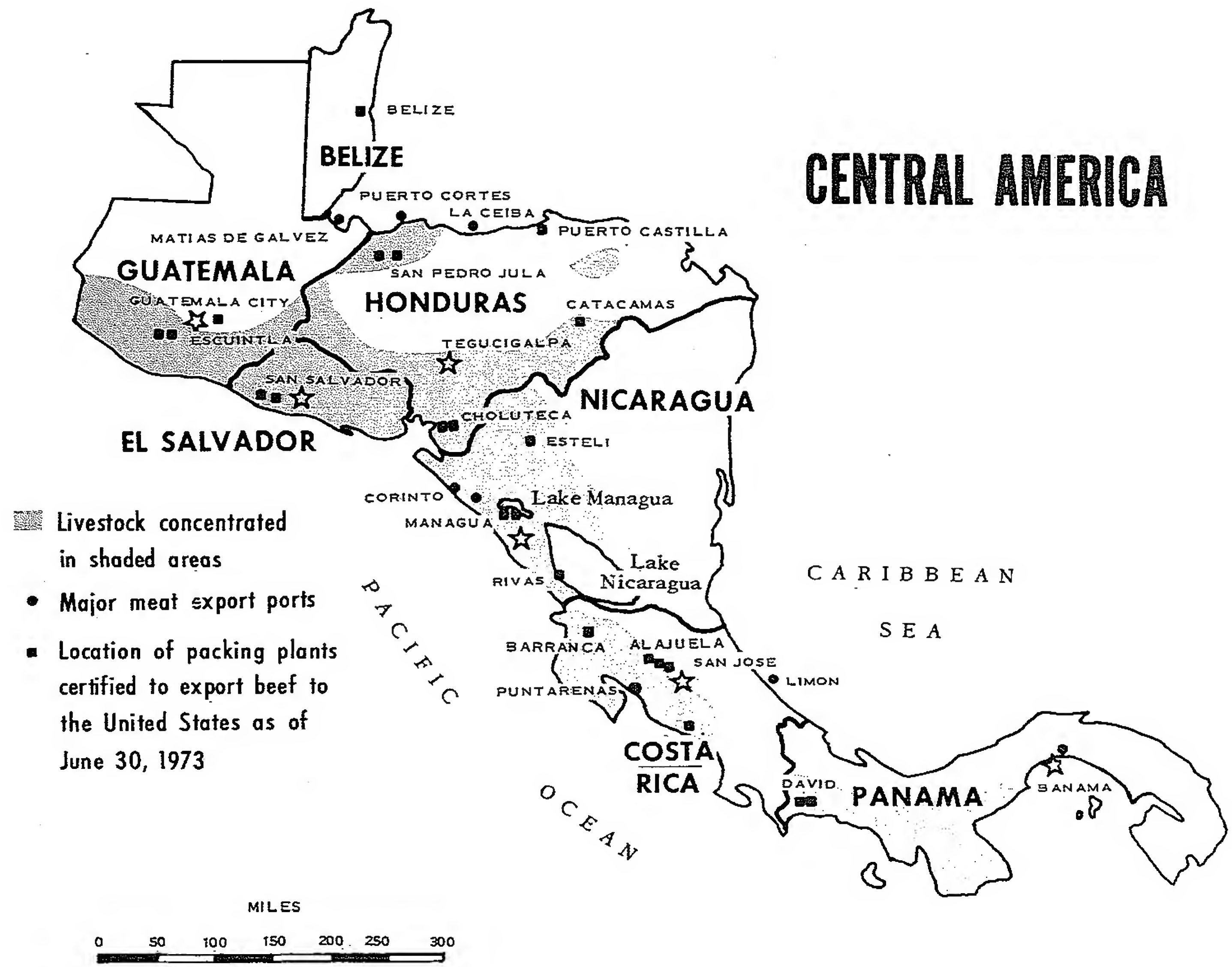

CENTRAL AMERICA
BELIZE
BELIZE
PUERTO CORTES
LA CEIBA
PUERTO CASTILLA
MATIAS DE GALVEZ
GUATEMALA
SAN PEDRO JULA
HONDURAS
CATACAMAS
GUATEMALA CITY
ESCUINTLA
TEGUCIGALPA
SAN SALVADOR
NICARAGUA
CHOLUTECA
EL SALVADOR
ESTELI
CORINTO
Lake Managua
MANAGUA
Lake Nicaragua
RIVAS
CARIBBEAN
SEA
PACIFIC
BARRANCA
ALAJUELA
SAN JOSE
PUNTARENAS
LIMON
COSTA RICA
DAVID
PANAMA
BANAMA
OCEAN
Livestock concentrated in shaded areas
Major meat export ports
Location of packing plants certified to export beef to the United States as of June 30, 1973
MILES
0
50
100
150
200
250
300

FOREWORD

The central American countries and Panama have enjoyed a rapid rate of economic growth during the past 10 years. Although in percentage terms industry has probably shown the greater increase, most of the growth in gross national product has been derived from expanded production of agricultural commodities. Nonetheless, the economies of these countries still suffer from the weakness of over-dependence on one or two export products. They are particularly vulnerable when one considers that in almost every instance their leading dollar exchange earners (coffee and cotton in Guatemala and Nicaragua, coffee and bananas in Costa Rica and Honduras, and bananas in Panama) are products subject to surplus accumulation and severe price fluctuations in world markets.

Aware of their vulnerable position, the governments and private sectors of these countries, assisted by technical missions from international organizations and the U.S. Agency for International Development (AID), among others, have for the past several years sought to bolster their economies by encouraging increased self-sufficiency in food production and the development of new export lines to provide the foreign exchange necessary to pay for essential imports. Much of their attention has been centered on the livestock industry, which has played a traditional, though relatively minor, role in Central America and Panama since the colonial period.

The objective of this report is to examine the factors associated with the rising trend in beef production in recent years and assess future prospects. Hopefully, answers or reasoned judgments can be made in response to some of the perplexing questions concerning the beef cattle industry in Central America and Panama. Has the gain in productivity in the industry been as rapid as the expansion in slaughter operations; or, has the increase in numbers of cattle slaughterings been achieved partly in response to the construction of excess slaughter capacity at the expense of future production? What has been the effect of the campaign to expand beef exports on the availability of supplies for the domestic market? What are the prospects for production, domestic consumption, and exports over the next 7 years?

During his study in Central America and subsequent preparation of the report the author received assistance from many persons working in the fields of livestock production and marketing. He wishes to acknowledge with thanks the cooperation and assistance given him by the Central American industry and government representatives as well as U.S. Agricultural Attachés accredited to the respective countries.

This report supersedes The Beef Cattle Industries of Central America and Panama, FAS M-208, June 1969.

James P. Hartman, Director
Livestock and Meat Products Division

CONTENTS

The Beef Cattle Industries Of Central America and Panama

Q. Martin Morgan
Livestock and Meat Products Division

ral America's total exports of beef to the United ncreased 168 percent from about 62 million pounds to 166 million pounds in 1971. Previous studies and tions of the livestock situation in Central America te beef export expansion in the area largely to a expansion in export slaughter plant capacity and iversion of domestic supplies of beef to export. The ion was that the rapid increase in beef exports be short lived.

conclusion drawn by the author of this report is that nprovements in calving percentages, growing and g time, take-off rates, and average slaughter , together with improved marketing and trans- on facilities, have been responsible for a large part of rease in beef production for export. In some es per capita supplies of beef have declined, but ave been offset by increases in supplies of viscera —all of which are consumed domestically.

demand for beef, undoubtedly, will continue to be stronger in the United States than in Central a. More countries in Central America likely will r that export control programs will be necessary to n domestic supplies of beef. This is particularly true as the U. S. import restraint program remains led. Nevertheless, Central America can maintain or increase its domestic per capita supplies of beef and e to increase exports.

al America, undoubtedly, has lost appreciable l cow beef production due to policies that ge producers to retain females irrespective of itability for reproduction. (Female stock not for breeding should be culled at a relatively age and fattened for slaughter.) Policies of the American governments are changing. The uan Government is undertaking to examine and nproductive females for slaughter. The recogni- the need for systematic culling and slaughter of unproductive females will eventually contribute to gradual improvements in calving percentages and take-off (slaughter as a percentage of inventory numbers) rates.

Surprisingly, it is mathematically possible for Central America's beef production in 1980 to exceed the 1970 output by nearly 80 percent with annual increases of only 3.5 percent in inventory numbers, 0.5 percent in calving percentage, 0.25 in take-off and 3 pounds in average slaughter weights.

The expectation that Central America's beef production in 1980 will be some 60 percent above 1970 appears to be reasonable, if institutional restraints do not hamper increased investment by raising obstacles to price increases for the producer.

The available data on the cattle industry in Central America are subject to questions of reliability. Questions of reliability are related primarily to estimates of supplies of beef available for domestic consumption. The contention is that beef exports have made further inroads into domestic supplies than the official data indicate.

A large proportion of the beef sold on the domestic market is cow beef. Supplies of beef available for domestic consumption are at best based in part on dubious estimates of the number and average live weights of animals slaughtered. In some instances there is no clear indication that the beef consumption figure excludes the consumption of viscera (offals). All of the viscera produced and passed as wholesome, including viscera from animals slaughtered for export, is consumed locally. Viscera, being priced relatively low, is an important source of animal protein for many consumers who cannot afford red meat. Consequently, if all of the viscera from the export plants continues to be sold on the domestic market, domestic consumers will have an appreciably larger per capita supply of animal protein in 1980 than 1970—even with very little change in per capita consumption of beef.

GUATEMALA

stry characteristics

ttle population of Guatemala in 1973 is estimated on head, 9 percent more than a year earlier. Cattle are estimated to have increased by one-third over 5 years. This occurred while the take-off rate was est in Central America—in excess of 20 percent. of slaughter cattle, or imports of cattle destined for slaughter after fattening on pastures, contributed to the relatively high take-off rate.

Beef cattle are distributed mainly in the Pacific coastal departments of Escuintla and Suchitepequez and in the departments of Santa Rosa and Jutiapa along the frontiers with El Salvador and Honduras. Smaller numbers are scattered throughout the central highland area. Some land has been cleared and cattle ranching established in the north coastal region.

The Pacific coastal area, however, is still the major livestock area both in terms of numbers and degree of modernization of the industry. Although the region suffers from a dry season of 5 to 6 months duration each year, which is characteristic of the Pacific side of Central America, the period of severe stress and shortage of pastures is limited to about 3 months as a consequence of average rainfall of 100 inches or more than is reflected in a high water table. Some of the more progressive ranchers are preparing ensilage from corn and/or sorghum as well as hay. Also, irrigation from the numerous streams and rivers that flow from the central mountians to the Pacific Ocean is being used by a number of ranchers to provide forage and pastures during the dry season.

The Pacific coastal plain is an area of generally good soils and offers excellent conditions for fattening cattle on grass. Land values are high and increasing, but there appears to be little likelihood of a displacement of cattle from the area in the near future. Cotton is and will remain a major competitor for land, but the acreage devoted to bananas has diminished.

The coastal area also has been the major center for fattening feeder steers brought in from Honduras and El Salvador. Both Honduras and El Salvador are hopeful that more of these cattle will now be fattened at home and slaughtered in their own slaughter plants. In order to achieve this objective both countries will have to establish cattle feeding operations using mostly local feed supplies. Competitive prices offered by their slaughter plants, certified to export to the United States, are restricting the movement of the cattle to Guatemala, but unless adequate feed supplies are available at reasonable prices the more lush pastures across the border could result in a continuation of a significant movement of feeder cattle to Guatemala. The grass-fattened steers will likely continue to be slaughtered in the nearest export plant. Aware of the desirability of increasing its own cattle mass in order to take advantage of beef export possibilities, each country controls its live cattle exports more carefully each year. In Guatemala, live cattle exports must be under license. By law (Decree 13-72) the country prohibits feeder cattle exports. The decree, enacted in May 1972, was strongly opposed by cattle growers.

The majority of the cattle are still predominately "criollo" as evidenced by average slaughter weights which are some 140 pounds, live weight basis, below those of Costa Rica. Average slaughter weights also are higher in Panama and Nicaragua, but lower in Honduras and El Salvador. There is an increasing interest in improved breeds, primarily Brahman and Santa Gertrudis crosses, but this has not as yet been reflected in any significant increase in the average slaughter weights of cattle in Guatemala.

Processing and marketing facilities

Guatemala has three slaughter plants certified to export meat to the United States. These are (1) Exguapagra, S.A., Guatemala City; (2) El Ganadero, Escuintla; and (3) PAASA, Escuintla.

The normal combined slaughter capacity of the three plants is approximately 1,100 head per 8-hour day. Allowing for shutdowns due to holidays, shortages of fat cattle during periods of dry weather, and other contingencies the three plants have a combined, normal annual capacity to slaughter about 275,000 head.

Prices

Prices paid by slaughter plants increased from about 14 cents per pound in 1968 to 18 cents in 1972. Wholesale prices of stew beef (the most widely consumed beef item in Guatemala) increased from 26 cents per pound in 1968 to 34 cents in 1972.

Boneless beef was quoted at about 69 cents per pound c.i.f. Miami in mid-1972 compared with 50 cents in 1968.

Development programs

Financial assistance to the livestock sector has been limited primarily to the normal services of the Ministry of Agriculture (investigations and a small artifical insemination program) and to the credit facilities of commercial banks and the National Agricultural Development Bank (Bandesa). With a total of U.S.$7.8 million the Ministry of Agriculture initiated a cattle development program in the Pacific coastal plains in 1972 to develop 247,000 acres of grazing land with the objective of producing an additional 18 million pounds of beef in the next 6 or 7 years.

Trade

Trade policy.—Guatemala's trade with other Central American (CACM) countries is generally free of restrictions, but imports from non-CACM countries are subject to duties and imports licensing. Purebred cattle imported are duty free, but other cattle and livestock products are subject to relatively high imports duties. In recent years inedible tallow has been imported from the United States under the Pioneer Industries Act at reduced duties, but in July 1972 (at the instigation of domestic cottonseed producers), the importation of tallow was prohibited except for soap manufacturing when a demonstrated shortage exists (Decree 44-72).

Exports.—Exports of beef from Guatemala have increased sharply. Exports totaled nearly 40 million pounds, product weight, in 1972 compared with less than 11 million pounds in 1964. Practically all of the beef is boneless beef shipped to the United States.

Guatemala also exports small quantities of meat and live cattle, mostly purebred, to neighboring countries, principally El Salvador and Mexico.

Facing possible fast increasing meat exports that would reduce domestic availability and increase local prices to consumers, the government included provisions for meat export quotas in the law passed in May 1972 (Decree 13-72), which prohibited exports of feeder cattle. Under this law the initial export quota for 1973 was set

at 37,650,000 pounds of fresh, frozen, and chilled boneless beef and 2,500,000 pounds of prepared and preserved beef.

Imports.—Guatemala has traditionally imported lightweight feeder cattle, primarily from Honduras and El Salvador. In the late 1960's imports of feeder cattle averaged about 35,000 head annually. The recorded imports of feeder cattle declined to a little over 20,000 in 1970 and to fewer than 10,000 in 1972. With neighboring countries striving to increase exports of beef further declines in recorded imports of feeder cattle are likely. Some illicit trade in live cattle occurs. The size of this (unknown) trade undoubtedly varies in accordance with differences in cattle prices and pasture conditions in Guatemala versus those prevailing in Honduras and El Salvador.

Imports of purebred cattle in recent years have been about 700 head annually. The United States has been supplying over 80 percent of the purebred cattle. Mexico is the second largest supplier of cattle for breeding.

Guatemala: Beef production, net exports and consumption, carcass weight, average 1959-63, annual 1964-72

Period	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	82,345	7,191	75,154	19
1964	94,000	14,459	79,541	18
1965	93,291	17,570	75,721	17
1966	95,938	17,975	77,963	17
1967	108,367	26,644	81,723	17
1968	125,493	28,271	97,222	20
1969	124,425	36,933	87,492	17
1970	125,790	36,316	89,474	17
1971	140,643	50,531	90,112	17
1972	158,945	54,225	104,720	19

Guatemala: Exports of beef and veal, by type and country of destination, product weight, annual 1964-71

Item and country	1964	1965	1966	1967	1968	1969	1970	1971
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Fresh, chilled, frozen:								
Nicaragua	0	0	0	0	0	19	6	([1])
El Salvador	0	0	0	71	48	101	292	108
United States	10,361	12,745	13,424	19,285	20,450	26,752	26,191	35,117
Costa Rica	0	0	0	0	0	0	0	150
Other countries	143	66	49	0	0	0	0	0
Total	10,504	12,811	13,473	19,357	20,498	26,871	26,490	35,375
Dried, salted, smoked:								
United States	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1
Sausage:[2]								
Costa Rica	15	21	9	0	87	([1])	7	42
El Salvador	146	112	132	118	168	113	122	260
Honduras	165	46	26	90	121	134	118	24
Nicaragua	20	5	13	15	21	19	19	37
Panama	0	0	0	0	0	0	3	2
Total	347	183	180	223	397	266	270	365

May not add due to rounding.
[1] Less than 500 pounds.
[2] Includes beef and pork.

Source: Direccion General de Estradistica.

HONDURAS

Industry characteristics

The cattle population of Honduras was estimated officially at 1.6 million head in 1973 as compared with 1.5 million in 1968. The annual increase, according to the information available, indicates that cattle numbers in Honduras have been increasing only slightly more than 1 percent annually for more than a decade. This is in sharp contrast with the trend in numbers in two neighboring countries, Guatemala and Nicaragua.

In the absence of a current census of cattle numbers, estimates of inventory numbers in some if not all Central American countries may be based to a considerable extent upon changes in the supply of slaughter cattle. Apparently, for Honduras, the increase in slaughter is attributed largely to the decline in recorded exports of feeder and slaughter cattle. This type of balancing of the total supply of feeder cattle and slaughter cattle with inventory numbers may have resulted in an underestimation of the Honduran cattle inventory. Technicians believe it to be close to two million head.

The need for a reliable current census of the cattle inventory including its composition by age and sex is not confined to Honduras. In the absence of a comprehensive census for all of the countries in Central America it is most difficult to evaluate the beef production potential for each of the countries.

Honduran cattle are scattered throughout the country with the exception of the northeastern departments. The major concentration is in the southern departments of Choluteca and Francisco Morazan, with significant but smaller numbers in the central departments of Santa Barbara, Comayagua, and Olancho. Although the Department of Cortes is the only north-coast area with substantial numbers of cattle, it is perhaps the most dynamic in the country in terms of livestock development. Cortes has the highest quality cattle and the best soils in the country. The area around San Pedro Sula, in particular, represents one of the major areas in Central America suitable for intensive livestock production.

The central departments have considerable potential for extensive livestock production (cow-calf operation). The Pacific area, which experiences a long dry season and has generally poorer soils, has limited potential for livestock expansion under present management practices.

Perhaps as much as 80 percent of the cattle in Honduras are owned by small farmers, few of whom own as much as 100 acres of land or 50 head of cattle. The remaining 20 percent of the ranchers generally own from 100 to 500 head. The small size and subsistence nature of a high percentage [illegible] farms holding cattle make progress difficult and slow [illegible] by the relatively small estimated annual [illegible] cattle are of the criollo [illegible] tures. This is reflected [illegible] about 630 pounds, live weight, and most of the cattle are around 4 years of age. An idea of the potential, particularly for the north-coast area, may be gained by noting that some ranchers using Santa Gertrudis bulls and high-grade Brahman cows market slaughter steers weighing nearly 1,000 pounds at 2½ years of age.

Processing and marketing facilities

In 1972 there were five slaughter plants certified to export meat to the United States. These were: (1) Empacadora Alus, S.A., San Pedro Sula; (2) Empacadora Cortes, S.A. de C. V. (CORSA), San Pedro Sula; (3) Industria Ganadera Hondurena, S.A. de C. V., Choluteca; (4) Empacadora Rancho Lorenzo, S.A., Catacamas; and (5) Empacadora del Norte, Puerta Castilla. A sixth plant, Empacadora de Carnes (Carnilandia), Choluteca, began to export beef to the United States in January 1973. A seventh, Empacadora Oriente Industrial, in Danli, is being remodeled for export operations to begin in mid-1973; slaughter capacity is expected to be 100 head daily.

The normal combined slaughter capacity of the six plants is approximately 1,100 head per 8-hour day. Allowing for shutdowns due to holidays, shortages of slaughter cattle during periods of dry weather, and other contingencies the six plants have a combined normal annual capacity to slaughter about 275,000 head. As in the case with most installations throughout Central America, the Honduran slaughter plants generally operate at a level considerably below capacity. Nevertheless, a heavy run of slaughter cattle for a short period may result in overtime operations in plants as is true in other Central American countries.

Transportation systems are not highly developed in Honduras, and cattle arrive at slaughter points in a variety of ways. Some are hauled by truck or rail, both of which need expansion and modernization. Many are driven overland, which may result in cattle losing weight enroute and arriving at the slaughter plant in poor condition.

Most of the Honduran (boneless) beef destined for export is transported to Puerto Cortes on the north-coast by refrigerated truck-trailers which are placed aboard vessels for export, primarily to Florida, with a small percentage destined for other United States points of entry, including Puerto Rico. Some shipments leave from the Pacific coast port of Amapala, going north to California or through the Panama Canal to Florida and/or other Gulf or east coast points of entry.

Prices

Prices paid by export plants for cattle continue to rise as a result of higher prices paid in the United States for imported boneless beef. Prices paid by slaughter plants for cattle in early 1973 ranged from US$15.00 per 100 pounds,

live weight, for animals weighing 801 to 850 pounds to $17.50 for 900 to 1,000 pound animals. In 1968 cattle prices ranged from $9.00 to $13.00 depending upon the weight.

Development programs

The National Development Bank extends credit for agricultural development projects. Funds for these projects have come from the Central Bank of Honduras, the Inter American Development Bank, and USAID.

During the 1960's most of the loans extended by the National Development Banks for livestock projects were destined for the purchase of feeder cattle, infrastructures on ranches (fences, buildings, etc.) and for persons interested in dairying. Only a small amount of the loan funds went directly for the improvement of the beef cattle sector. Most of this was used by north-coast cattlemen for the importation of purebred animals, primarily Brahmas, from the United States.

Since 1968 the Government of Honduras has formulated a more comprehensive livestock development program.

A Livestock Project Office was established by the Central Bank in 1971 to administer a World Bank Loan of US$2.6 million for livestock development. With matching domestic funds, the total of US$5.2 million was disbursed through private banks as long-term loans to cattlemen for the financing of infrastructure and breeding cattle purchases. In mid-1972, the World Bank was asked for an additional US$9.6 million for the project, and this second phase, which probably will amount to US$11.5 million, was expected to begin by September 1973.

In recent years the banking system of Honduras has given preference to the livestock sector. In 1970 loans to the livestock sector totaled about US$21 million, up from $17.5 million in 1969. Loans, apparently above the 1970 amounts, have continued to be made. Disbursements of new loans under the Livestock Development Project and greater disbursements by the Honduran banking system will make more funds available for financing imports of breeding stock.

Trade

Trade policy.—The Government of Honduras exercises no control over prices of cattle or meat either for domestic utilization or export. Opposing forces campaigned in 1972 to restrict exports of cattle, but the effect (if any) was that of increasing prices paid by slaughter plants for cattle. A 1964 regulation provides that no male beef animals weighing less than 660 pounds, and no females whatever, may be exported without payment of a tax of 50 lempiras (US$25) per head. Meat plant employee union and other interested parties have been urging strict enforcement of this regulation.

In March of 1972 the Ministry of Economy issued a decree which may have repercussions for some meat packers who are also in the business of exporting. The decree is designed to control marketing and to ensure an adequate supply of reasonably priced meat on the domestic market, allocating export quotas on the basis of several factors. One of the factors is "efforts to increase the sale of meat on the domestic market." At least one plant which has concentrated on exports has sold little or no beef on the domestic market. When the decree was issued the U.S. voluntary restraint program may have been a factor. Honduran officials may have visualized the decree as a mechanism for regulating exports of beef to the United States under the voluntary restraint program, and at the same time achieving a more reliable supply for the domestic market. The situation changed somewhat when the U.S. Government suspended the restraint program in mid-year for the balance of 1972.

Exports.—Honduras has been exporting meat in increasing quantities since 1958. Exports in 1972 were about 38 million pounds, product weight, compared with 15 million pounds in 1968 and 9 million pounds in 1964.

Exportation of live cattle, mostly feeder cattle, has been a traditional feature of the export trade. Since 1968, when, according to official statistics, 29,057 head were exported, the trend has been generally downward. The following year the total was 10,151, in 1970 it was 8,413, and in 1971 it declined further to 4,626 head. Unofficially, exports were reported to have risen again to 19,098 head in 1972. In addition to these "legal" shipments, it is generally conceded that a considerable number cross the borders clandestinely into Nicaragua and Guatemala.

Increased slaughter in recent years is attributed in part to a decline in exports of live cattle. If this has not occurred, then the annual cattle inventory numbers for Honduras are underestimated. The increase in numbers slaughtered may have resulted from corresponding increases in the breeding herd.

Imports.—Honduras continues to import a relatively small number of purebred breeding stock as indicated by U.S. export statistics. In recent years U.S. exports of purebred beef animals declined while Honduran importers were showing relatively more interest in purchases of dairy cattle. In 1965 U.S. exports of purebred cattle to Honduras totaled 677 head, of which 421 were beef animals. In contrast U.S. exports to Honduras in 1972 totaled 177 head of which 162 were dairy cattle.

Honduras also imports small quantities of beef and pork items such as sausages, ham, and meat extracts from a number of countries. Imports of inedible tallow, mostly from the United States, have been in the neighborhood of 10 million to 15 million pounds annually. Apparently, increased domestic output began to displace imports of tallow in 1971.

Honduras: Beef production, net exports and consumption, carcass weight, 1959-63, annual 1964-72

Period	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	38,124	8,437	29,687	16
1964	40,980	11,921	29,059	14
1965	42,911	16,024	26,887	12
1966	53,566	18,519	35,047	16
1967	51,383	18,950	32,433	14
1968	57,285	20,037	37,248	15
1969	63,819	33,637	30,182	12
1970	66,056	36,764	29,292	11
1971	83,716	45,892	37,824	14
1972	90,500	51,001	39,499	14

Honduras: Exports of beef and veal, by type and country of destination, product weight, annual 1964-71

Item and country	1964	1965	1966	1967	1968	1969	1970	1971
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Fresh, chilled, frozen:								
Belgium-Luxembourg	0	56	0	4	0	0	0	3
France	0	0	0	0	0	0	28	80
Colombia	47	23	0	22	25	23	2	14
Guatemala	42	25	([1])	([1])	167	42	36	4
Belize	48	0	0	0	0	0	3	0
El Salvador	9	233	130	45	137	116	0	0
Nicaragua	0	([1])	25	4	15	11	0	0
Costa Rica	0	21	50	0	0	0	0	0
Martinique	0	0	0	0	0	0	9	60
Japan	0	0	0	0	0	240	0	0
United States	8,657	11,453	13,435	13,484	14,484	24,287	26,940	33,185
Netherlands	0	0	0	0	0	0	0	12
Panama	0	0	0	0	0	0	0	168
Other countries	1	0	0	0	0	0	0	0
Total	8,840	11,811	13,641	13,993	14,828	24,719	27,018	33,532
Sausage:[2]								
El Salvador	1	0	0	0	0	0	0	0
Colombia	4	([1])	0	0	0	0	1	0
Total	5	([1])	0	0	0	0	1	0

May not add due to rounding.

[1] Less than 500 pounds.
[2] Includes beef and pork.

Source: Comercio Exterior de Honduras.

BELIZE

Industry characteristics

The cattle population of Belize (formerly British Honduras) is estimated at 40,000 head in 1972, compared with 30,274 in 1968.

With much of the New Jersey-size land area under rain forest and the human population also small (about 124,000), it is anticipated that any significant development in beef production will result in supplies in excess of domestic requirements.

The small cattle population is distributed in all six districts of the commonwealth, but more than 50 percent are in the Cayo district and about 35 percent are in the Belize and Orange Walk districts. The undeveloped forest

lands in the northern part of the country are mostly level while those in the southern region rise sharply into the Maya Mountains ranging from 2,000 to 3,680 feet above sea level.

The climate is subtropical and the temperatures in the coastal region range from 50°F, to 95°F, with a mean annual temperature of 79°F. The coolest period is from November to January (averaging 75° F.) and the warmest period is from May to September (average 81°F). The dry season begins in February and lasts until May, while the rainy season begins in June and lasts through December and sometimes January. Rainfall varies considerably but northern districts typically receive 50 to 70 inches.

Appreciable areas of the colony possess soils covered by lime-rich materials. Most of the soils, due to the relatively high rainfall, are deficient in the basic elements—potash, phosphate, and nitrogen.

Processing and marketing facilities

The Belizean meat inspection system was approved by the United States Department of Agriculture and certified as being equal to the U.S. inspection system in late 1972. One slaughter plant, the Belize Meat Packers, Ltd., completed in 1972, was certified as meeting USDA standards and was authorized to export meat to the United States in early January 1973.

The anticipated initial slaughter capacity of the Belize plant is 80 head per day, or about 24,000 head annually. It is anticipated, however, that no more than 5,000, or at most 6,000, head will be available for export slaughter in 1973 unless import sources are found. Thus the plant will process the equivalent of about 1.2 million pounds of boneless beef in 1973. Total output is to be exported, primarily to the United States, in 1973. Additional quantities could be exported if slaughter cattle imports can be arranged. Local butchers and abattoirs slaughter about 4,000 head annually for domestic consumption.

Development programs

Although very limited development in beef production has occurred to date, Government policies and inducements are favorable for livestock investment. Tax holidays are granted up to 15 years, except that dividends on profits are exempt from taxation only until profits exceed the amount invested. Custom duties and entry tax on building materials, plants, machinery, etc., are waived for the duration of the tax holiday for producer companies that hold a development concession. Foreign capital may remit profits, capital gains, and capital investment with the approval of the Government. A foreign-owned company must have a prior agreement with the Government to operate. Such an agreement also is necessary for (U.S. Government) Overseas Private Investment Corporation (OPIC) insurance.

Trade

Trade policy.—Belize trade policy is very similar to that of other British dependent territories. The Commonwealth Caribbean countries have both preferential and general tariffs which vary appreciably from product to product and one country to the next in the British Caribbean area. In most instances the rates are relatively low, being established primarily for revenue purposes.

Exports.—Belize traditionally has been a net importer of meat and meat products with negligible exports. Unless beef exports, anticipated at a little over 1 million pounds in 1973, result in larger imports of other meats, Belize will likely become a net exporter of meat in 1973. The future growth of this trade is dependent upon the development of grazing lands and on expansion of cattle numbers. Expansion of the beef cattle industry, undoubtedly, will be slow over the next few years.

Imports.—Belize imports relatively small quantities of a number of meat speciality items, primarily pork. Salted or pickled pork and bacon account for the bulk of these imports.

Belize: Beef production, net exports and consumption, carcass weight, average 1959-63, annual 1964-72

Period	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	878	-96	974	10
1964	1,039	-367	1,406	14
1965	1,075	-515	1,590	15
1966	1,176	-507	1,683	16
1967	1,112	-543	1,655	15
1968	1,319	-672	1,991	17
1969	1,006	-722	1,728	15
1970[1]	1,046	-803	1,849	16
1971[1]	1,280	-559	1,839	15
1972[1]	1,280	-570	1,850	14

[1] Estimates.

NICARAGUA

Industry characteristics

The total cattle population of Nicaragua was estimated at 2.3 million in 1973 compared with 1.3 million in 1968. These estimates are based on information from well-informed persons and private organizations, and in part upon gains in beef output. Lower calf mortality and slaughtering of and reducing the number of older animals (which resulted in temporary increases in slaughter) undoubtedly have been major factors contributing to increases in slaughter numbers and gains in beef production.

Future gains in beef production are more directly dependent upon expansion of the cow herd and/or higher calving percentages. Currently, there are far too many cows in Nicaragua (as is true in other Central American countries) which breed and produce a calf only 1 year out of 2 and often 3. Consequently, the average cattle owner does not detect infertile cows in his herd and may carry "free boarders" for several years.

A Nicaraguan Government program to test cows for fertility was initiated in July 1972. Cows tested by veterinarians and judged to be incapable of future calving are being marked for slaughter. This program represents a sharp departure from past government policies, which encouraged the retention of female cattle and placed the responsibility on the owner to take the initiative in having his cows declared unfit for reproduction. If the new program achieves a reasonable degree of success a temporary increase in the production of cow beef will occur; and following this temporary increase in beef output, cow beef, through systematic culling, could be expected to account for a larger proportion of total beef output than formerly. Also, efforts to ensure that the breeding herd consist of potentially fertile cows would result in higher calving rates.

Although the Caribbean coastal areas of Nicaragua offer the greatest potential for livestock, cattle traditionally have been raised in the areas of greatest population density—that is, the Central and Pacific Coast departments. The latter, in particular, offer generally favorable conditions, including flat or gently rolling terrain, rich volcanic soils, and ready access to markets as constituted by the domestic populace. A disadvantage is the long dry season, lasting 5 to 6 months when pastures dry up and water becomes scarce.

A few of the larger and more favorably located ranches irrigate at least some of their pastures, while some producers use silage and make hay. Currently, interest is building for feedlot operations. Some feedlot fattening is occurring, but with a low protein ration since feedgrains are expensive and in limited supply.

A high percentage of the cattle in the Pacific and coastal areas continue to suffer during the dry season, when much of the weight gains of the previous months are lost. Feedlot operations and/or supplemental feeding during this period at least would appear to be economically feasible. The alternative is to step up pasture improvement in areas where feeder stock can be moved during the summer months and provide supplemental feeding for breeding stock.

An additional limiting factor for the livestock industry in the Pacific coastal area is the competition for land from crops such as cotton, sugar, bananas, rice, sesame, which if properly managed yield higher monetary returns per acre. This dependence on crops contributes to numerous small owner operations for livestock which are not responsive to new practices in livestock production. Despite its problems the area will undoubtedly continue as one of the major livestock centers in the country. In the future, however, there is likely to be a trend away from raising cattle to that of purchasing steers from other parts of the country for fattening. Cottonseed meal or cake and byproducts can and are being used in feedlot operations, the eventual success of which is dependent upon a continuous supply of feed-grains at reasonable prices.

Conditions in the central departments are less favorable than on the Pacific Coast and the area is more suited to an extensive type of cow-calf operation or, in the better parts, intensive dairy farming. In time, with more specialization, these areas will likely provide more feeder cattle for finishing elsewhere. Significant increases in production for this area, also, are largely dependent upon improvements in production and management practices such as upgrading of breeding stock, pasture improvement, supplemental feeding, and veterinary care. Improved practices and new techniques in management also are difficult to introduce in the central departments where many ranchers and farmers are small holders. In fact, there are very few large cattle ranches in all of Nicaragua; most of the cattle are held by ranchers and farmers owning from 100 to 500 head each.

As is true in most other Central American countries, due to increasing exports of beef to the United States, a beef export industry has been super-imposed in part "on top" of the traditional cattle enterprise. Ranchers who import breeding stock and upgrade the native criollo cattle through cross-breeding, primarily with American Brahman sires, generally deliver their slaughter cattle to export slaughtering plants. A major proportion of the slaughter steers are sold to the export plants. Consequently, developments in processing and marketing facilities related to exports are important factors contributing to the recent gains in beef production.

Processing and marketing facilities

Without question, the marked improvement in processing and transportation facilities associated with exports of beef has had a favorable impact on the development of the livestock industry. Areas formerly remote from markets and where cattle had to be driven overland are now connected to the export packing plants or major centers of domestic consumption by good paved or all-weather roads.

The road completed in the 1960's from Managua to Rama serves the double purpose of opening up a large new area for cattle raising and providing a Caribbean port from which meat is exported directly to Florida and other U.S. Gulf ports.

Nicaragua has four slaughter houses certified to export meat to the United States. These are (1) Empacadora Nicaraguense S.A., Candega, Esteli; (2) Ifagan y Cia. Ltda. (Matadera Modelo), Managua; (3) Productos Carnic, S.A., Managua; and (4) IGOSA, Rivas.

The normal combined slaughter capacity of the four plants is approximately 800 head per 8-hour day. Thus on the basis of an 8-hour day and 52 weeks of operation, the four plants have a normal maximum capacity to slaughter about 250,000 head of cattle per year. Allowing for periods of dry weather when some of the plants must be closed due to inadequate supplies of slaughter cattle, the four have the normal capacity to slaughter about 215,000 head of cattle per year. Possibly another 3 percent of effective normal capacity is lost due to holidays. Thus, the effective, combined, normal capacity of the four plants is estimated at about 209,000 head per year.

During 1971 the recorded slaughter of the four export plants totaled 187,714 head. However, most export plants worked overtime in the latter part of 1971 to supply the increased quantities of quota beef which Nicaragua was permitted to ship to the United States under the short-fall provision of the voluntary restraint program. When the voluntary restraint program was suspended in mid-year 1972, the plants had adequate capacity to slaughter all of the cattle that were available, resulting in total slaughter of 206,700 head.

The requirements of the export plants in terms of slaughter capacity are partly dependent upon the number slaughtered and beef processed for the domestic market. Output from municipal plants plus clandestine (farm and other unlicensed) slaughter were estimated at 137,235 head in 1971. The average weight of slaughter cattle for export was estimated at 450 pounds, carcass weight, in 1971. On the basis of average slaughter weights the quantity of beef processed by the export plants, 76 million pounds, carcass weight, was roughly equivalent to exports.

Cattle purchased by the export plants, mostly steers, are heavier than the cattle slaughtered by municipal slaughterers. Consequently, the export plants slaughter 58 percent of the cattle, but processed in the neighborhood of 70 percent of the total quantities of beef produced in 1971. This would have allowed for domestic sales of about 15 million pounds of beef, carcass weight, by the export plants in 1971.

Prices

Prices paid by the export plants for slaughter cattle have increased substantially over the past 5 years. In mid-1972 the quoted price for a 1,000-pound steer at the farm gate was about 18 cents per pound, liveweight. This represented an increase of about 50 percent over mid-1968.

Development programs

Nicaragua has a national program for beef cattle; however, the program suffers from certain deficiencies both of scope and execution. The Caribbean region offers the greatest potential for the future, but only limited development for beef cattle has occurred in that region. New development programs for cattle in the area have been limited and confined largely to dairy cattle.

Programs implemented in recent years range from that of the National Development Institute (INFONAC), which was designed primarily to finance the importation and dissemination of purebred Brahman cattle, to the program of the National Bank of Nicaragua, a comprehensive effort to increase the calving percentage, reduce mortality rates, improve pastures, and encourage construction of fences, wells, silos, etc. No particular government assistance is granted, however, other than set-asides of production credit given each year to the cattle industry by the National Bank.

During the past 5 years, an Argentine firm of livestock consultants has provided technical advice to cattlemen and conducted surveys under contract with the National Bank of Nicaragua.

In addition to money for the above-mentioned programs, funds for livestock development have been made available by the government based on loans from the Inter-American Development Bank (IDA). Additional foreign assistance has been provided for the Nicaragua livestock industry under programs sponsored by U.S. Government agencies and universities.

In all of these (above mentioned) programs, funds made available for assistance and development of the Nicaraguan livestock during the past decade have been at least US$30 million.

Trade

Trade Policy.—The Nicaraguan Government exercises no control over prices paid for slaughter cattle for export or domestic consumption. The government is anxious to prevent a reduction in supplies available for the domestic market and an informal agreement with the largest packing plant, the Matadero Modelo, insures that the municipal slaughterhouse in Managua can purchase the quantities required by the market from Matadero Modelo.

Exports.—Nicaraguan exports of beef have increased substantially since 1965. Exports of fresh, chilled, and frozen (mostly boneless) beef increased from 20.7 million pounds, product weight, in 1965 to 65.9 million pounds in 1972. About 98 percent of the exports of fresh, chilled, and frozen beef are destined for the U.S. market. Relatively small shipments to neighboring Central American countries occur each year and similar shipments have been made to Western Europe and Japan. Exports to these distant markets have been largely experimental in nature.

Nicaragua's exports of cuts of beef (not subject to restraints) to the United States have increased steadily, reaching 8.5 million pounds in 1971. When the U.S. Government suspended the import restraint program on

June 26, 1972, for the balance of the year, some market observers assumed that the trade in cuts would be curtailed until import restraints were reimposed. This did not occur primarily because the parties concerned (the Nicaraguan exporters and the U.S. importer) both were interested in continuing this trade. However, exports of this category of beef did decline to 5.2 million pounds in 1972 from 8.5 million pounds in 1971.

Nicaragua was for many years a relatively large exporter of live cattle, but such shipments have virtually ceased as a result of increased slaughter in the country and restrictive government regulations. Some illicit shipments do occur periodically if prices are temporarily out of line when compared with prices of slaughter cattle in neighboring countries. However, during 1972 most of the illicit trade in slaughter cattle was into rather than out of Nicaragua.

Imports.—Nicaragua imports relatively insignificant quantities of sausages, canned pork, and other meat specialty products. The United States is generally the major supplier.

Imports of purebred breeding stock, which amounted to 2,522 head in 1965, declined to 1,190 head in 1966 and 379 head in 1967. Imports of purebred cattle have continued below the 1967 level except in 1969 when 504 head were imported. In 1971, 186 head were imported, 151 of which were from the United States.

Nicaragua: Beef production, net exports and consumption, carcass weight, average 1959-63, annual 1964-72

Period	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	61,260	20,748	40,512	29
1964	79,090	32,434	46,656	29
1965	74,550	28,527	46,023	28
1966	83,849	38,726	45,123	26
1967	91,765	44,566	47,199	27
1968	105,500	52,026	53,474	29
1969	117,884	61,298	56,586	30
1970	131,800	74,068	57,732	30
1971	139,751	72,787	66,964	33
1972	151,132	86,000	65,132	32

Nicaragua: Exports of beef and veal, by type and country of destination, product weight, annual 1964-71

Item and country	1964	1965	1966	1967	1968	1969	1970	1971
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Fresh, chilled, frozen:								
Belgium-Luxembourg	0	0	207	169	96	56	0	0
Netherlands	0	0	0	0	0	116	0	52
Germany, West	0	3	([1])	0	0	76	0	94
El Salvador	866	42	([1])	0	2	7	10	([1])
Costa Rica	0	124	51	([1])	131	588	137	630
Honduras	2	44	0	0	2	0	0	0
Netherland Antilles	1,114	804	14	0	0	0	0	100
United States	22,185	19,697	27,933	32,233	37,634	43,855	53,722	53,823
United Kingdom	0	0	6	0	0	0	0	0
Japan	0	0	0	0	0	0	0	163
Total	24,167	20,714	28,211	32,403	37,867	44,699	53,869	54,863
Dried, salted, smoked:								
Germany, West	6	([1])	0	0	8	3	4	0
United Kingdom	([1])	([1])	0	0	4	5	3	0
Costa Rica	18	0	0	0	0	0	0	40
United States	74	119	112	154	174	143	181	0
Total	100	119	112	154	186	152	189	40
Sausage:[2]								
El Salvador	7	9	10	9	([1])	0	0	0
Guatemala	([1])	19	2	4	([1])	0	0	0
Honduras	12	25	26	48	35	25	33	0
Costa Rica	0	0	0	0	0	0	14	([1])
Total	19	54	38	62	37	25	47	([1])

May not add due to rounding.
[1] Less than 500 pounds.
[2] Includes beef and pork.

Source: Comercio Exterior de Nicaragua.

EL SALVADOR

Industry characteristics

The cattle population of El Salvador in 1973 was estimated at about 1.2 million, about the same as in 1964. El Salvador became an exporter of beef to the United States for the first time in 1972. Prior to 1972 El Salvador was a net exporter of cattle, primarily to Guatemala where they were fattened on pasture for slaughter and the export of beef to the United States.

Although the farm area is limited, El Salvador depends heavily upon agriculture, which directly accounts for about one-fourth of its gross national product and three-fifths of the active labor force. Due in part to the absence of an export market for beef, crop production has been expanding more rapidly than livestock. The net increase in food production has been increasing at a rate only a little above the growth of the human population.

One of the major problems confronting the livestock industry in El Salvador is the small size of producing units. In the past a major proportion of the steers were exported as feeder stock. Cows and oxen accounted for the major part of domestic cattle slaughter. More of the steers are now being retained for slaughter in El Salvador. The beef produced in export plants will be exported, but the viscera (offals) from these steers will be sold in the domestic market. Thus, the export plants in El Salvador will result in an increase in low-priced animal protein supplies (viscera) for the domestic market.

Processing and marketing facilities

El Salvador has one slaughter plant which was certified to export meat to the United States in 1972 and a second plant scheduled for completion and possible certification early in 1973. Both plants are located near San Salvador. The first is Quality Meats S.A., and the second is Mataderos S.A.. The combined normal slaughter capacity for the two plants will be about 350 head per day. Allowing for holidays, shutdowns during the dry season and other contingencies these two plants have a normal combined capacity to slaughter about 90,000 head per year. The actual slaughter will depend upon the supply of cattle. Additional cattle could be slaughtered if the plants worked overtime; however, it is more likely that the combined capacity of the two plants will exceed the supply of export-type cattle in 1973.

Slaughter for domestic consumption for the 3 years prior to 1972 is estimated at 145,000 head per year. Assuming an average take-off rate of 15.1 percent, which is the 1969-71 average for the six Central American countries including El Salvador but excluding Belize. El Salvador's take-off in 1973 (based on 1973 numbers and zero net exports) could approximate 179,000 head. This would exceed recent estimates of domestic slaughter by 34,000 head. This 34,000 head represents a small percentage of the normal slaughter capacity of the two export plants. Consequently, as apparently occurred in other Central American countries, exports of beef will likely result in the diversion of some domestic slaughter cattle to export plants. The loss in domestic beef supplies will be partially offset by increased output of viscera (offals), all for the domestic market.

Prices

Cattle prices and apparently beef prices have been below prevailing prices in neighboring countries during recent years. In mid-1972 cattle prices in San Salvador were about the same as Managua prices. Beef prices also were comparable in the two markets. Cattle prices, with the additional slaughter capacity of the second export plant, are likely to remain at competitive levels with market prices in neighboring countries in 1973.

Development programs

External financial assistance for Salvadoran agriculture over the past decade has been limited to relatively small AID loans, but these have been supplemented by funds from the Central Bank's Economic Development Fund. These funds have been used for supervised credit, livestock development, and irrigation projects.

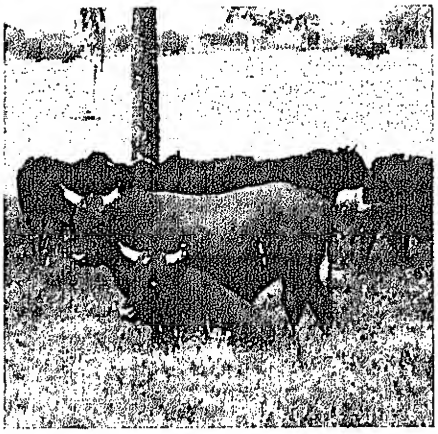
As in most Central American countries, the agricultural economy of El Salvador is dependent upon only a few commodities. Three crops—coffee, cotton, and sugarcane—provide about three-fourths of the total value of agricultural production. Thus, one of the goals of current development programs is to achieve more diversification of agriculture through an expansion of the livestock sector.

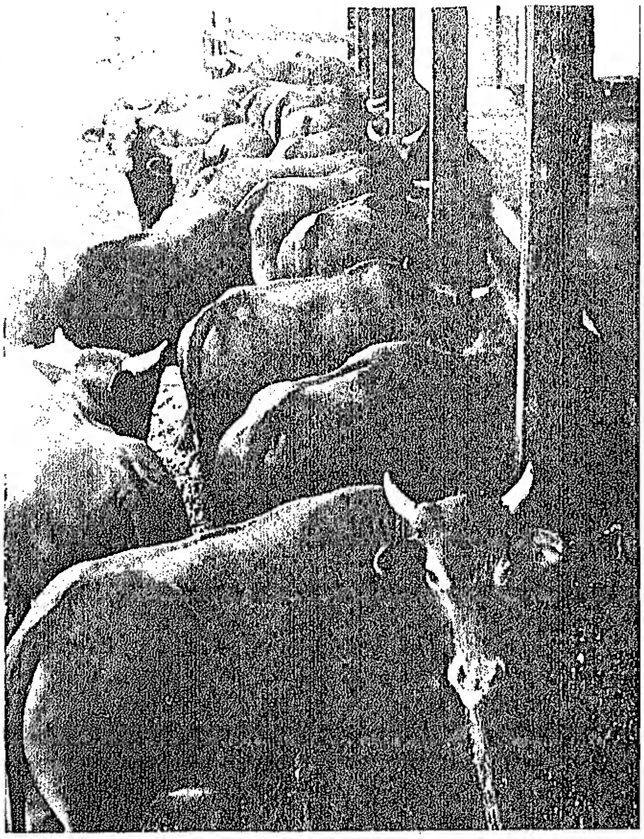
In order to export beef to the United States the Ministry of Agriculture has strengthened its sanitary and inspection organization. Also, working with private industry the Ministry has endeavored to encourage improvements in production practices—including the importation of purebred breeding stock and experiments in feedlot fattening of slaughter cattle.

In mid-1972 some 3,000 head of cattle were being fattened with the use of various byproducts such as chicken litter, corncobs, cottonseed hulls, coffee wastes, cacao pods, urea, molasses, and some grain byproducts. El Salvador, like the other Central American countries, is deficient in supplies of feedgrains, high-quality roughages, and high-protein supplements which are considered essential in the United States for feedlot fattening of cattle. Furthermore, feedgrains (due to competition from and higher prices for foodgrains) are not likely to become available to Central American cattle producers at reasonable prices in the near future.

Thus, prospects for improvements in beef production in El Salvador (as is true in other Central American countries) in the immediate future are dependent largely upon

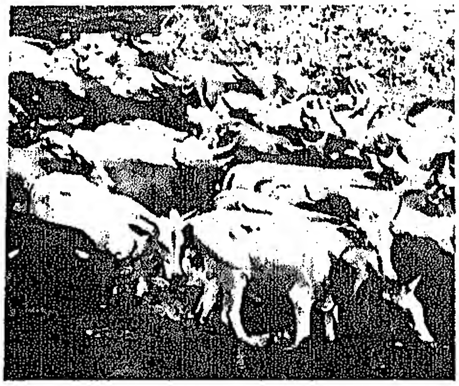
Belize

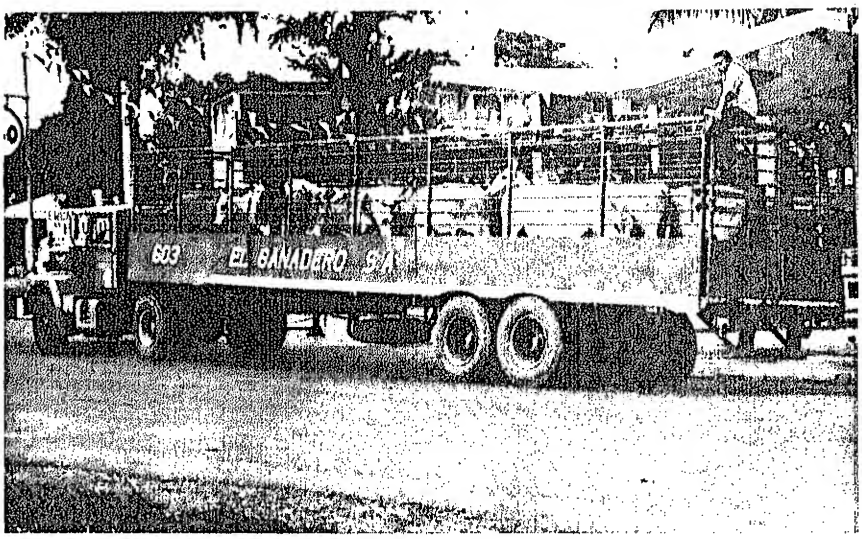


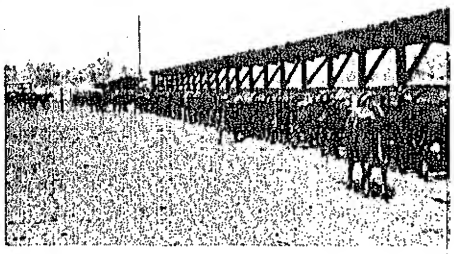


Clockwise from above, improved native cattle; Brahman, crossbred cattle in feedlot; Santa Gertrudis cattle in feedlot; and Santa Gertrudis bulls on pasture.

Guatemala

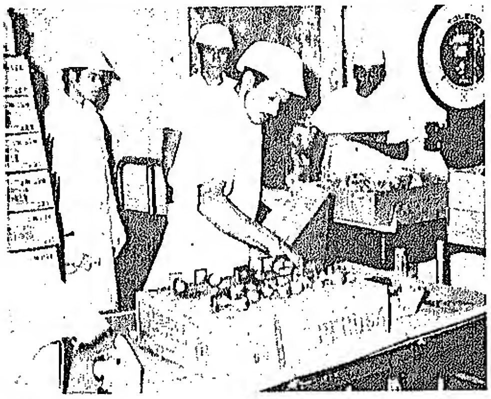


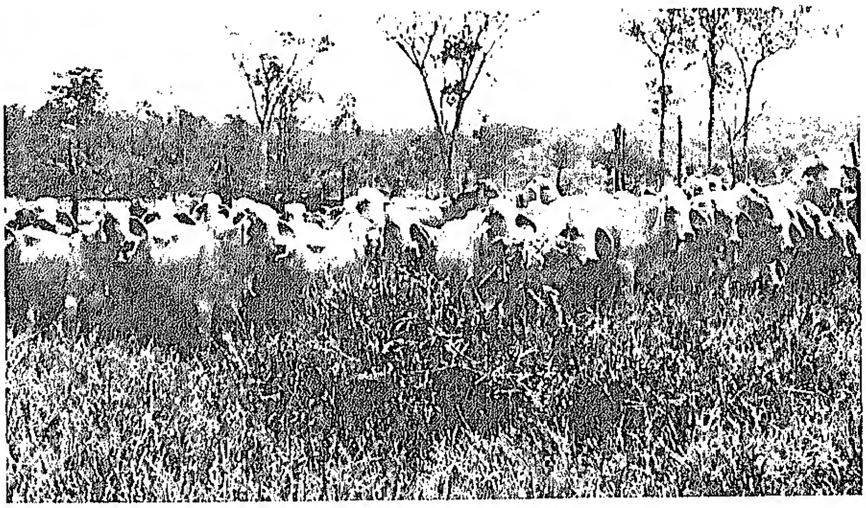


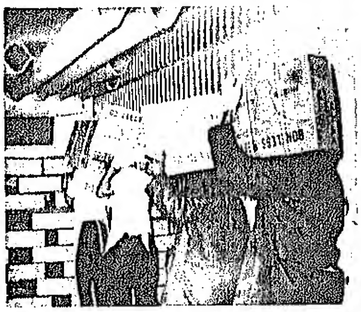


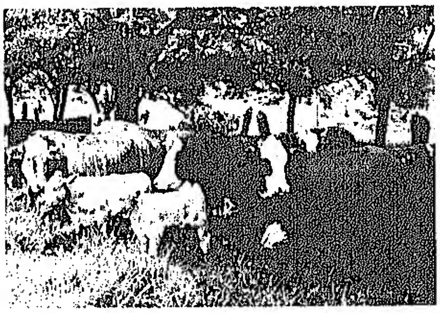
Clockwise from above, Criollo cattle crossing stream to pasture; modern transport carrying slaughter cattle to packing plant; crossed Angus-Brahman steers in feedlot; and crossbred cattle with mixed bloods.

Costa Rica



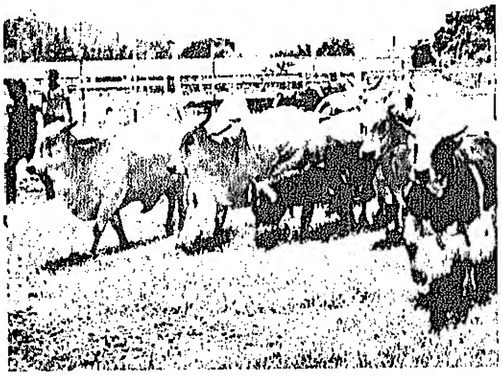


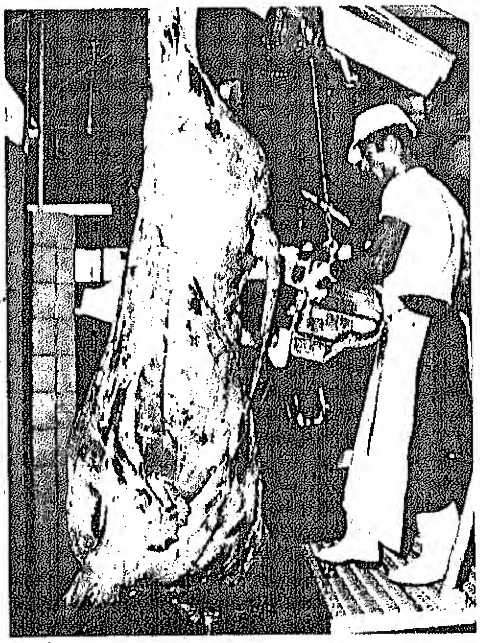


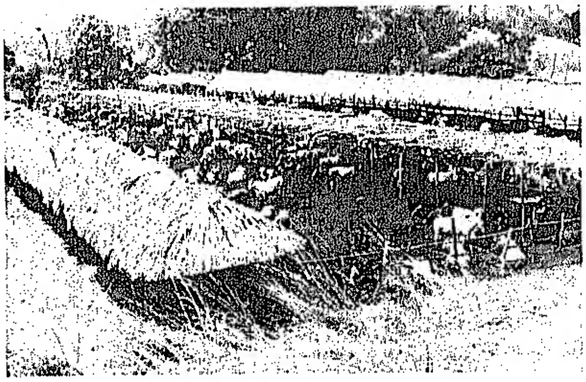


Clockwise from left, Brahman-Hereford cross cows with their calves from Charolais sire; boxed, boneless beef being loaded in refrigerated trailer; packaging boneless beef to buyer's specifications; and Brahman heifers on German grass pasture.

El Salvador







Clockwise from left, packers holding pen; packers feedlot; purebred cattle, beef and dairy, for sale by El Salvador Government; automatic hide puller in operation; and carcass splitting—another step in the slaughtering process.

breeding programs and pasture and forage production programs. The current calving rate in El Salvador is estimated at 47 percent. Better nutrition and management practices as well as improved breeding stock are needed for increase calving rates and productivity of cattle herds to desired levels. Productivity gains will come about slowly for producers using only native criollo cattle, irrespective of their management practices. Some improvement in breeding stock has occurred as a result of the importation of purebred bulls and heifers. Artificial insemination programs have been initiated, which should contribute to further improvements in breeding stock.

Trade

Trade Policy.—El Salvador is a member of the Central American Common Market (CACM), and trade with member countries is generally free of restrictions and duties. Agricultural products traded with non-CACM countries are licensed for exchange control. Restrictive licensing may be applied to exports of some commodities, including livestock, during periods of scarcity to insure adequate domestic supplies. Import duties for food products from non-CACM countries have been increased under the CACM agreement. Purebred stock, which are the United States' major livestock export to El Salvador, are admitted duty free.

Exports.—Prior to 1972 live cattle, shipped to Guatemala, constituted El Salvador's major livestock export. El Salvador exported a record 28,693 head of cattle in 1963 and 20,765 were recorded as exported in 1967. Since 1967 recorded exports have declined below 5,000 head. The reported exports, undoubtedly, were supplemented by illicit exports, the quantity of which cannot be estimated except as (in terms of) a balance in terms of previous averages that bring the total to (previous averages of) about 15,000.

El Salvador began exporting beef to the United States for the first time in 1972. Shipments of quota-type beef were facilitated by mid-year suspension of the voluntary restraint program under which El Salvador's share of the U.S. market was 3.0 million pounds. In total El Salvador's exports of beef to the United States were about 8.0 million pounds in 1972. Assuming that the second plant will be certified to export beef to the United States in 1973, then both plants have a capacity to process about 27 million pounds of beef. It is unlikely, however, that the Government of El Salvador will allow exports to reach this level. Thus, the export plants will have to slaughter cattle for the domestic market in order to more effectively utilize their capacity.

Imports.—El Salvador's major imports in the livestock sector are cattle and hogs for breeding. Imports of purebred cattle from the United States, both dairy and beef, averaged about 500 head per year in the mid-1960's. Imports of purebred cattle have declined, totaling 211 in 1970 and less than 100 in 1971. However, appreciable numbers of commercial grade cattle, nearly 2,000 head in 1970, have been imported from neighboring countries. U. S. export data indicate that El Salvador increased its imports of purebred cattle in 1972.

Hogs are imported from Nicaragua and Guatemala. Imports, primarily for slaughter, totaled 7,967 head in 1972 compared with 11,700 head in 1971. With less beef available for domestic consumption, due to increasing exports, there may be a stronger market for pork. There is a reluctance to invest heavily in hog farming in El Salvador for fear that normalization of trade relations with Honduras will bring an influx of low-priced hogs from that country.

El Salvador: Beef production, net exports and consumption, carcass weight, average 1959-63, annual 1964-72

Period	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	40,735	-49	43,763	17
1964	45,670	-31	45,701	16
1965	45,578	-77	45,655	16
1966	48,012	-80	48,092	16
1967	46,795	-46	46,841	15
1968	45,296	-287	45,583	14
1969	45,265	-251	45,516	13
1970	45,139	-366	44,425	13
1971	44,764	-276	45,040	12
1972	52,350	8,541	43,809	12

El Salvador: Exports of beef, by type and country of destination, product weight, annual 1964-71

Item and country	1964	1965	1966	1967	1968	1969	1970	1971
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Fresh, chilled, frozen:								
Guatemala	0	76	77	2	0	([1])	0	0
Nicaragua	0	18	0	0	0	0	0	0
Total	0	94	77	2	0	([1])	0	0
Dried, salted, smoked: Total	90	0	7	0	143	0	([1])	0
Sausage:[2]								
Guatemala	0	0	0	6	0	([1])	0	0
Honduras	0	6	0	14	4	9	18	0
Nicaragua	0	0	0	5	5	0	0	0
Costa Rica	0	6	0	5	8	0	0	0
Total	[3]2	12	[3]26	30	18	9	18	0

May not add due to rounding.

[1] Less than 500 pounds.
[2] Includes beef and pork.
[3] Country of destination not available.

Source: Anuario Estadistico-Tomo III, Comercio Exterior.

COSTA RICA

Industry characteristics

The total cattle population of Costa Rica in 1973 was estimated at 1.7 million head, an increase of 41 percent over the estimated number for 1964. Approximately, three-fourths of the 1972 number may be considered beef animals; the remainder are essentially dairy type. Criollo-type cattle can still be found, but Costa Rica has made more progress than any other Central American country in the improvement of livestock through grading up with pure-bred and/or larger bulls.

In the beef cattle sector most of the purebred breeding stock utilized have been Brahman. A small number of other purebred bulls—such as Santa Gertrudis, Charolais, Brangus, Angus, Hereford, and Indu-Brasil—have been imported. The Indu-Brasil, imported from Mexico, is larger but slower maturing than the American Brahman. Ranchers are attracted to the Indu-Brasil because of its size.

Beef cattle are concentrated in the Pacific coastal provinces of Guanacaste and Puntarenas, while dairy animals are concentrated in the central plateau provinces of San Jose and Alajuela. Similar to the situation in Nicaragua, the Caribbean side of Costa Rica has the potential for a substantial increase in beef production. Cattle numbers are increasing in this area, but the trend is to use the improved pastures, when they are established, to feed out feeder stock purchased at low prices in Guanacaste and Puntarenas during their dry season. Because of the longer rainy season, pastures are green throughout the year on the Caribbean side. The lack of roads, excess rainfall—which increases the problem of parasites—and competition for land for crops are all limiting factors.

In the beef cattle areas of the Pacific coastal region management practices are also more advanced than in most cattle raising areas in other Central American countries. Although data are not available to support the contention, Costa Rica is believed to have more medium—and large—size ranches, that is, those with 150-500 head or over 500 head, respectively. Thus management practices are more advanced, which is partly responsible for the comparatively heavier slaughter weights of Costa Rica cattle.

Processing and marketing facilities

As of December 1972 there were four packing plants in Costa Rica certified to export meat to the United States. These were: (1) Planta Empacadora de Carnes de Costa Rica, S.A., Barranca; (2) Ganadera Industrial S.A., Liberia; (3) Coop. Mat. Nal. Montecillos, Alajuela; and (4) Henderson and Cia S.A., Alajuela. In addition, there are two boning plants authorized to process meat for export to the United States—Beef Products Company, S.A., San Jose; and Central American Meats, S.A. Alajuela.

The combined normal capacity of the four export plants on the basis of 6 days per week is in the neighborhood of 200,000 head per year. This is almost double the capacity needed for export slaughter; and if the plants could be operated continously for 8 hours of each work-day, the maximum capacity would be much higher. The plants generally shut down for 3 to 4 months following their heavy slaughter period of December-April, which generally corresponds to the country's dry season. In addition holidays and other periods when the availability of cattle is below capacity levels result in slaughter numbers being below the estimated normal capacities of the plants.

Although the above-mentioned factors justify the existing excess capacity (and additional capacity is under construction) this overcapitalization is an expense to the industry. An expansion in feeder cattle production for fattening in the Caribbean area is needed to supply slaughter cattle more in line with current export slaughter capacity. However, as this type of expansion occurs on the Caribbean side—plants likely will be constructed near the source of slaughter cattle.

Currently some of the excess slaughter capacity of plants certified to export to the United States is utilized for domestic slaughter—i.e. steers diverted to the domestic market. With additional capacity under construction and plans being considered for new plants, the export plants will intensify the competition for slaughter cattle to supply both the export and domestic beef markets.

The marketing system for cattle in Costa Rica differs significantly from that of any other Central American country. Sales of slaughter cattle for a number of years have been regulated by the Consejo Nacional de Produccion (CNP) an official entity that determines the number of cattle that can be slaughtered each year and then allocates quantities between export and domestic slaughterings. Prior to 1973, the procedure each year was for the CNP to poll the various livestock associations to determine the number of cattle ranchers planned to market during the Costa Rican cattle year, which was from September to August 31. The council then reserved a certain percentage of total available cattle for domestic beef consumption. The remainder was allocated and announced as an export quota. Exports were limited (as they still are) to steers and bulls and/or beef produced from the slaughter of the same.

The export quota was then divided among the ranchers through their associations on a proportionate basis. The packers paid the value of the export cattle they slaughtered directly to the council which, in turn, reimbursed the cattlemen through their respective associations. Disenchantment with the system may have contributed to illicit exports of slaughter cattle in the 1971-72 cattle marketing year (September 1 thru August 31), but appreciable movement of Costa Rican cattle to Nicaragua was attributed to payments in U.S. dollars which could be converted to Costa Rican currency at the free market rate.

In December 1972 a new law was enacted which modified and strengthened procedures for allocating the supply of cattle and beef for domestic consumption and export.

The major difference between the old regulations and those set by the new law is that the new law establishes exacting procedures for deliveries of the domestic quotas of slaughter cattle and beef and provides severe penalties for cattlemen and/or export firms for noncompliance.

The major objective cited for the new law was to provide adequate protection for both consumer and producer. The fulfillment of this objective is entrusted to the Consejo Nacional de Produccion which continues to function. However, the CNP is advised by a committee of meat marketing. The committee consists of one representative from the CNP, two cattle producers, one representative from the meat packing industry, and one representative from the Ministry of Economy, Industry and Commerce. Committee members serve 2 years and cannot be re-elected.

The new law changes the cattle year from a split year to a calendar year. Cattlemen selling cattle for export slaughter are required to file declarations of availabilities for the cattle year, January-December, with the CNP. The advisory committee makes an assessment of domestic requirements and recommends to the CNP the quantities of beef that should be made available by quarters to the domestic market. When the domestic quotas have been determined the committee recommends to the CNP the annual export quota, by kilos of beef. It also recommends a quantity to be held in reserve which can be exported if it is not needed for domestic consumption. If there is a shortage of beef in the domestic market, the reserve in part or total can be used to increase the domestic quotas. If shortages continue, exports can be suspended.

Cattlemen are required to supply cattle for the domestic market proportional to what they want to export—in accordance with the domestic and export quotas. Export plants which acquire cattle for domestic consumption must market domestically a quantity of beef corresponding to the number of cattle acquired. All slaughter cattle destined for the domestic market must be killed separately and the beef processed and stored separately from export meat.

The price of live cattle and beef is set by free negotiations between the interested parties. Price differences between domestic and export slaughter cattle may occur, due to the assessment of fines and penalties for noncompliance of export firms in domestic deliveries of beef.

Export firms that do not supply to the domestic market a quantity of beef equivalent to the number of cattle purchased for the same period must pay a ten-colon (about 1.2 U.S. cents) fine for each kilogram not delivered. The first infraction will result in the cancellation of the firm's export permits for the following quarter, the second infraction in a year suspension, and the third in an indefinite suspension of the firm's export permits.

The law also provides for levies charged to producers and export plants to pay some of the costs of administering the law and for investment in refrigeration and CNP retail outlets that sell beef in the domestic market. The levy on producers, selling cattle for export and deducted from the producers' payment, is 2 cents of a colon per kilo of live

cattle sold. The levy on export plants is 25 cents of a colon per metric ton of beef exported.

The slaughter quota for 1971-72 (the last full year before the new law became effective) was 230,000 head of which 120,000 were allocated for export. The actual slaughter for 1971-72 is estimated at about 110,000 head, and reportedly 10,000 head of slaughter cattle were exported to Nicaragua.

The total number of slaughter cattle was about equally divided between domestic and export markets but appreciably more beef was exported. This is because the domestic market quota includes lighter animals (cows and calves which cannot be slaughtered for the export of beef and veal). This situation will continue to exist. Preliminary estimates indicate that 64 percent of the total beef production will be exported as boneless beef in 1973. However, domestic quotas are more likely to be delivered because under the new law these are set by kilos of beef. Shortfalls in production will result in reductions in exports.

Prices

During 1972 export steers averaged about US$21.40 per 100 pounds, live weight, up from $19.70 a year earlier. Prices of export steers strengthened in the last quarters of 1972, averaging about $22.50. Costa Rican export plants offering prices for cattle were competitive with those' prevailing in Nicaragua. However, a difference of about 14 percent between the official and free exchange rates in terms of U.S. dollars for Costa Rican currency was a major factor contributing to the export of about 10,000 head to Nicaragua during the 1971-72 cattle year.

Development programs

A comprehensive beef development program was drafted by the national planning office in 1966; however, it has not been implemented. Credit has been, and continues to be, made available for the importation of breeding stock and the purchase of feeder cattle for fattening and infrastructure development on ranches. Most of the funds available from international institutions over the last few years ($25 to 30 million) have gone into infrastructure developments on ranches. Costa Rica has a well developed extension service; and government facilities for research, animal sanitation, and cattle registration are reputed to be the most advanced in Central America.

Government and industry representatives recognize the need for continuing development of the livestock sector, particularly pasture improvement and more intensive methods of production. However, a major effort and financing will be required before more rapid progress can be made. Small-scale pasture improvement programs dependent to a large extent upon low-cost labor may be advantageous to individual ranchers in the short run, but significant progress in the long run will be determined largely by the total amount of capital inputs and new technology employed by the cattle industry.

Trade

Trade policy.—As already noted Costa Rica regulates exports by means of a quota established annually by the Consejo Nacional de Produccion. It also establishes minimum prices for certain cuts of beef sold locally.

Although the object of this policy has been to maintain domestic consumption of beef, it has not been entirely successful. Per capita consumption averaged 27 pounds during the 5 years 1959-63, increased to 30 pounds in 1965, and declined to 18 pounds in 1968. Per capita supplies for domestic consumption increased gradually between 1968 and 1971, but per capita consumption during 1971 was still 3 pounds below the 1959-63 average. With high export prices, the pressure to sell abroad is great and the program to divert a set percentage of the steers for domestic slaughter has been difficult to enforce. Although a percentage of the steers have been allocated for domestic slaughter, some of the beef from these animals, most likely, was not delivered to the domestic market. In addition the internal market is supplied primarily by the slaughter of cows and calves, which yield far less meat per head than the export steers. The 1972 law, if it is strictly enforced, will provide for a more accurate accounting of the distribution of beef between domestic and export markets.

Exports.—Costa Rican exports of beef have increased from 19.3 million pounds, product weight, in 1964 to about 50 million pounds in 1972. Virtually all of Costa Rica's exports of beef have been to the United States. Less than 2,000 pounds of beef was exported to markets other than the United States in 1972.

The rapid rise in Costa Rica's exports of beef since 1966 is attributed in part to a shift in exports from live cattle to beef. Also, in recent years prior to 1972, the illicit trade in live cattle moved into Costa Rica; whereas in 1972 the movement was from Costa Rica to Nicaragua.

Imports.—Costa Rica imports only small quantities of meat and meat products, primarily pork products, sausage, and meat extracts.

Costa Rica continues to import purebred cattle for breeding purposes, mostly Brahman cattle from the United States. However, an increasing percentage of Brahman cattle are being imported from Mexico. The Unites States, in recent years, has supplied about 70 percent of Costa Rica's imports of cattle for breeding, Mexico 20 percent, and Canada the balance.

U.S. exports of beef cattle for breeding increased sharply to 1,602 head in 1971 up from 631 head in 1970. U.S. exports to Costa Rica continued to grow in 1972 with shipments of beef cattle totaling 1,871 head.

Costa Rica is the leading importer of cattle for breeding in Central America. These imports have made a major contribution to the Costa Rican cattle industry as reflected in the higher average slaughter weight of steers for export. In addition other Latin American countries, such a Peru, are looking to Costa Rica for breeing stock particularly Brahman.

Costa Rica: Beef production, net exports and consumption, carcass weight, average 1959-63, annual 1964-72

Period	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	53,310	17,472	34,838	27
1964	61,200	28,302	32,898	23
1965	59,200	15,072	44,128	30
1966	63,200	23,092	40,108	26
1967	69,600	33,714	35,886	23
1968	76,000	47,112	28,888	18
1969	89,100	53,563	35,537	21
1970	93,150	56,032	37,118	21
1971	103,050	58,905	44,145	25
1972	108,000	73,765	34,235	19

Costa Rica: Exports of beef and veal, by type and country of destination, product weight, annual 1964-71

Item and country	1964	1965	1966	1967	1968	1969	1970	1971
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Fresh, chilled, frozen:								
France	0	0	0	37	0	0	0	0
Switzerland	0	0	5	0	0	0	0	0
Colombia	0	0	0	0	1	0	0	1
Netherland Antilles	0	0	10	0	0	0	0	0
Curacao	63	25	28	139	0	0	0	0
Jamaica	(1)	(1)	(1)	0	13	10	3	12
El Salvador	0	0	6	0	0	0	0	0
Nicaragua	0	(1)	27	0	0	0	0	0
Panama	0	0	0	0	0	0	0	2
United States	19,188	10,216	15,607	22,750	32,236	37,098	38,518	41,028
Total	19,252	10,243	15,684	22,927	32,249	37,108	38,521	41,043
Dried, salted, smoked:								
Germany, West	0	4	2	3	1	0	0	0
El Salvador	0	0	0	0	25	0	0	0
United States	0	0	0	3	0	0	0	0
Total	0	4	2	6	26	0	0	0
Sausage:[2]								
Honduras	12	44	32	53	11	4	7	0
Nicaragua	2	36	28	74	28	6	6	4
Panama	12	38	6	10	17	23	2	46
Guatemala	(1)	1	6	12	32	19	3	0
El Salvador	7	(1)	0	20	3	(1)	(1)	0
Colombia	1	7	(1)	(1)	(1)	1	2	4
Total	34	128	72	170	92	53	21	54

May not add to totals due to rounding.
[1] Less than 500 pounds
[2] Includes beef and pork

Source: Comerico Exterior de Costa Rica.

PANAMA

Industry characteristics

Panama's cattle population was an estimated 1.3 million head as of July 1, 1972, the same as a year earlier. During the 1960's Panama's cattle population increased at an estimated annual rate of 3 to 4 percent, the third highest in Central America—following Nicaragua and Costa Rica.

The majority of Panama's cattle are concentrated in the Pacific coastal area of the country. The provinces of Chiriqui, Los Santos, Veraguas, and Herrea, all located on the Pacific coast west of the Panama Canal, account for over 80 percent of the total. With the exception of Chiriqui, where more favorable conditions exist, these provinces are characterized by a prolonged dry season, a shortage of surface water, and generally poor soils lacking in phosphorus and trace elements. They are more suitable, therefore, for a rather extensive form of exploitation. With more specialization in the industry, these provinces would most likely concentrate on the production of feeder cattle to be fattened for slaughter in the provinces of Chiriqui, Panama, and others where conditions are less adverse.

The Panama livestock industry, as is true in other Central American countries, is characterized by the small average size of farms and ranches engaged in cattle raising. Small farms—those under 100 hectares (247 acres) account for 80 percent of the total cattle. Ranches exceeding 1,000 hectares account for less than 10 percent of the cattle.

Criollo type cattle are still to be found in substantial numbers, but the majority of beef cattle in Panama show evidence of Brahman blood.

Processing and marketing facilities

Panama has good hard surface roads from the major cattle producing provinces to the slaughter plants, and most cattle are moved by truck. However, due to the careless handling and the fact that it is not customary to dehorn cattle in Panama, a certain quantity of meat loss is incurred through bruising and trampling of cattle enroute.

There are two slaughter plants certified to export meat to the United States. These are: Carne, S.A., David; and Abattoir de Chiriqui, David. One boning plant is authorized to process meat for shipment to the United States—Empacadora Neptuno, Panama City. The combined capacity of the two slaughter plants is about 400 head per day. Allowing for holidays and other contingencies the combined normal slaughter capacity of the two plants is about 110,000 head per year. Both plants slaughter for domestic consumption as well as export.

The Canal Zone is a significant and growing market for Panamanian beef. Zone purchases (about 2.0 million pounds per year) are still below the level of exports. In addition U.S. military commissaries in the area purchase about 800,000 pounds annually. The balance, which in theory is available for domestic consumption, usually represents more than 90 percent of the total production; however, unknown quantities are sold for other distribution channels, principally ship's stores. Nevertheless, the economy, due in part to the Cancal Zone and U.S. activities, is stronger than in other countries in the region. Thus, consumer purchasing power is higher, which contributes to the highest per capita consumption of beef in the region.

With rising domestic demand for beef, per capita consumption increased from 45 pounds in 1967 to 52 pounds in 1971. Cattle marketings are controlled to a measurable extent by the Cattle Institute, a semi-official entity and the Cattlemen's Cooperative. The institute determines the number of cattle available and then sets the number which may be slaughtered for export.

Prices

Prices paid for export cattle are determined on the basis of bids from the slaughter plants, and the export quota is divided among the ranchers and plants on a proportionate basis. Live cattle prices rose to US$19 per 100 pounds and beef carcasses to $36 in early 1972. Retail prices, top grade beef, rose above $0.60 per pound. With U.S. prices for boneless beef rising in 1972 further upward price pressures were placed on export-type steers and top grade beef in Panama.

The Office of Price Control is charged with regulation of prices on the domestic market. However, prices paid for cattle and beef sold locally are about the same as those for export. The rising domestic demand, as evidenced by gains in per capita consumption, has made the task of the Office of Price Control somewhat less difficult.

Development programs

Credit and technical assistance have been extended to ranchers by a number of official government agencies. Private banks, including some U.S. banks, have extended credit for pasture improvement and the purchase of breeding stock.

Trade

Trade policy.—As already noted, the Cattle Institute and the Office of Price Control are responsible for establishing export quotas and domestic price levels, respectively, for meat and livestock.

Exports.—Prior to 1966 Panama's exports of beef were insignificant. Since 1966 exports primarily to the United States have varied from about 2.2 million to 5.2 million pounds of boneless beef. These shipments in terms of carcass beef represented only from 4 to 10 percent of production.

Imports.—Panama is a small but expanding market for canned or preserved pork products as well as portion-

control cuts of beef. In the past the United States has supplied significant quantities of the pork and beef imported, but recently Denmark has supplied about three-fourths of the pork and Costa Rica most of beef.

Between 1964 and 1968 Panama imported an average of about 200 head of cattle for breeding from the United States. Imports 1969-71 from the United States averaged less than 40 head.

Panama: Beef production, net exports and consumption, carcass weight, average 1959-63, annual 1964-72

Period	Production	Net exports[1]	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1959-63	47,970	1,494	46,476	42
1964	55,800	920	54,880	46
1965	60,300	1,291	59,009	47
1966	64,945	4,505	60,295	47
1967	66,600	6,599	60,001	45
1968	68,850	8,151	60,699	44
1969	73,800	6,446	67,354	48
1970	77,850	9,536	68,314	48
1971	85,050	5,519	79,531	52
1972	89,550	9,935	79,615	52

[1] Based on U.S. imports, and reported shipments to the Canal Zone and purchases by the military commissaries.

Source: U.S. Department of Commerce, Bureau of the Census; Anuario de Comercio Exterior de Panama; U. S. Agricultural Attache.

Panama: Exports of beef and veal, by type and country of destination, product weight, annual 1964-72

Item and country	1964[1]	1965[1]	1966	1967	1968	1969	1970	1971	1972
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Fresh, chilled, frozen:									
United States	55	58	2,306	3,075	4,250	3,120	5,198	2,599	5,362
Total	55	58	2,306	3,075	4,250	3,120	5,198	2,599	5,362

[1] Based on U.S. imports.

Source: U.S. Department of Commerce, Bureau of the Census.

PRODUCTION AND EXPORT PROSPECTS

The available data on Central America and Panama are not adequate for any sophisticated projections of beef production, consumption, and exports. Data on cattle numbers, beef production, consumption, and trade in live animals are subject to questions of reliability. The trade data for beef (country exports and U.S. imports) are reasonably accurate; but even these are subject to normal statistical errors. In a few specific instances the differences between a particular country's export figures and U.S. import data have been greater than one would expect due to normal statistical error.

Thus, the most logical approach to projecting beef production, consumption, and exports for Central America and Panama is to combine individual country data and make these projections for the area as a whole. In December 1970 the Food and Agriculture Organization of the United Nations published projections of meat production, consumption, and net exports for a number of regions of the world, including Central America. The projections assume that prices and policies remain constant.

The FAO projections include Mexico and all of the seven countries included in this report except Belize. However,

data for Mexico are tabulated separately and can be subtracted from the regional totals. The following discussion of the FAO projections for Central America and Panama excludes Belize.

Total meat production (red meat and poultry) in the five Central American countries and Panama are projected to 1980 by FAO at 66 percent above 1970, with meat consumption projected at 70 percent and net trade for meat in 1980 at 62 percent above 1970. Beef and veal production in 1980 is projected at 60 percent above 1970, beef and veal consumption at 58 percent and the net trade for beef and veal in 1980 at 70 percent above 1970.

The per capita consumption of red meat and poultry for Mexico and Central America is projected to increase from 39 pounds in 1970 to 45 pounds in 1980. Per capita consumption of beef and veal for the region is projected to increase from 18 pounds in 1970 to 21 pounds in 1980. Although the per capita figures for Central America cannot be calculated separately from the FAO report, it is apparent that the per capita consumption of beef and veal in Central America is expected to increase more than in Mexico while per capita consumption of pork and poultry is expected to rise more in Mexico.

The FAO projections indicate that Central America, excluding Belize, is likely to have about 282 million pounds of beef, carcass weight, available, above domestic demand, for export in 1980 compared with 174 million pounds in 1970. The 1980 projection of export availabilities is equivalent to about 200 million pounds of boneless beef.

Calculations using a hypothetical balance sheet for cattle production in the seven Central American countries included in this report indicate that the FAO 1980 projections for beef and veal production are reasonable. Assuming that the basic data in this report are reliable, then the following changes occurred in Central America's beef cattle industry between 1965 and 1970:

Inventory numbers increased on the average of 3.6 percent annually; average slaughter weights increased about 3 pounds annually; the take-off *rate* (slaughter as a percentage of inventory numbers) increased by 2.2 percent; and beef production increased by 8 percent annually.

The increase that occurred in beef production between 1965 and 1970 is not indicative of efficiency in production. In fact the take-off rate which increased from 13.1 percent in 1965 to 15.0 percent in 1970 is indicative of a relatively inefficient industry. However, the percentage increase in beef production between 1965 and 1970 is indicative of gains in beef output which can be attained when a relatively inefficient cattle industry begins to show improvements in production efficiency.

The accompanying table illustrates that Central America's beef production in 1980 could exceed 1970 by 52 percent if the cattle inventory increases by 3.5 percent and the average slaughter weights by 3 pounds annually with the calf crop and take-off rate remaining constant at 50 percent (weaned calves) and 15.03 percent, respectively. Assuming that the calf crop increases by 0.5 percent and the take-off rate by 0.25 percent annually with no change in average slaughter weights, the 1980 production could be 65 percent above 1970. With these changes in calf crop and take-off rate plus 3 pounds annually in average slaughter weights, the 1980 production could be 77 percent above 1970.

Central America and Panama: Projections 1970 to 1980 for cattle numbers, slaughter, and beef production

Year	Beginning inventory number	Assumption A[1]		Assumption B[2]		Assumption C[3]	
		Slaughter number	Beef production	Slaughter number	Beef production	Slaughter number	Beef production
	1,000 head	*1,000 head*	*1,000 pounds*	*1,000 head*	*1,000 pounds*	*1,000 head*	*1,000 pounds*
1970	9,174	1,379	540,706	1,379	540,706	1,379	540,706
1971	9,495	1,427	563,808	1,451	568,937	1,451	573,290
1972	9,827	1,477	587,994	1,526	598,345	1,526	607,501
1973	10,171	1,529	613,282	1,605	629,320	1,605	643,766
1974	10,527	1,582	639,286	1,687	661,473	1,687	681,717
1975	10,895	1,638	666,830	1,774	695,585	1,774	722,195
1976	11,276	1,695	695,120	1,864	730,874	1,864	764,426
1977	11,671	1,754	724,577	1,958	741,853	1,958	808,850
1978	12,079	1,815	755,222	2,057	806,550	2,057	855,918
1979	12,502	1,879	787,489	2,160	846,936	2,160	905,256
1980	12,940	1,945	820,984	2,268	889,283	2,268	957,323

[1] Assumptions: Inventory numbers increasing 3.5 percent annually; calf crop (weaned calves) remaining constant at annual rate of 50 percent; annual death losses 3 percent of adult cattle and weaned calves; take-off (slaughter as percentage of beginning inventory) remaining at constant annual rate of 15.03 percent; and average slaughter weight increasing by 3 pounds per year from 392.1 pounds in 1970 to 422.1 pounds in 1980.

[2] Assumptions: Same as A except calf crop increasing by 0.5 percent annually from 50 percent in 1970 to 55 percent in 1980; take-off rate increasing by 0.25 percent annually from 15.03 percent in 1970 to 17.53 percent in 1980; and the average slaughter weight remain constant at 392.1 pounds.

[3] Assumptions: Same as A, except average slaughter weight increasing by 3 pounds annually from 392.1 pounds in 1970 to 422.1 pounds in 1980.

COMPETITION WITH U.S. PRODUCERS

Since 1964, when the U.S. Meat Import Law was enacted, Central America has increased its share of U.S. imports of meats subject to the law. The Meat Import Law encompasses a market-sharing arrangement between domestic and import supplies of fresh, chilled, and frozen beef, veal, mutton, and goat meats. The law provides for growth of imports in proportion to the growth in U.S. domestic production. The rate of growth is the increase of U.S. commercial production for the 3-year period, current year plus 2 preceding years, over the average for the base period, 1959-63. During the base period, imports averaged 725.4 million pounds, equivalent to about 6.7 percent of the domestic production of these meats. Under the law the imposition of import quotas occurs when the Secretary of Agriculture estimates that annual imports are likely to exceed the adjusted base quota level by 10 percent.

Import quotas have not been operative since the enactment of the law; however, voluntary restraint programs were in operation between October 1968 and mid-1972. Between October 1968 and June 29, 1970, supplying countries agreed to limit their shipments to the United States in order to maintain the level of imports below the trigger level. Import quotas were invoked on June 29, 1970, but simultaneously suspended; and a new restraint level, which supplying countries agreed to, was established which exceeded the 1970 trigger level by 41 million pounds. The 1971 and 1972 restraint levels were both established by similar quantities above the respective trigger levels; but in mid-1972 the restraint program was suspended for the balance of 1972.

After the first quarterly annual estimate for 1973 projected likely imports of meat subject to the law at 1,450 million pounds, which was 403 million pounds above the adjusted base quota and 399 million pounds above the trigger level, the President, acting in the national interest, set meat import quotas aside for 1973. Thus, the period during which no restraints were applicable to imports of meat was extended. However, the law requires a quarterly review of meat imports by the Secretary of Agriculture.

Central America's share of the U.S. market for meats subject to the import law was 5.2 percent (31 million pounds) during the base period, 1959-63 and 11.2 percent (130 million pounds) in 1971—the most recent year when the import restraint program was operative. Central America was given this larger share in part because most of the Central American countries expanded their export slaughter plant capacity and exports during the period between January 1, 1965, and the end of 1968 when there was no import restraint program operative.

Even with a larger share of the U.S. market for meats subject to the import law, Central America exported some 35 million pounds of prepared beef cuts to the United States in 1971 which were not subject to the law. The principal reason these exports occurred was that the demand (purchasing power) for meat was stronger in the United States than in Central America. Since the relative demand has become even stronger in the United States, one conclusion is that the U.S. consumer is competing with the Central American consumer for the available supplies and the latter is losing ground.

Prospects are that the Central American consumer will continue to lose ground to the U.S. consumer. The U.S. projected per capita consumption of beef is 135 pounds for 1980, compared with 117 pounds in 1970. The FAO projections indicate that Central America's per capita consumption of beef is expected to increase from about 18 pounds in 1970 to 22 pounds in 1980.

Competition between the U.S. beef producer and the Central American is somewhat different. The percentage increase in available supplies for export in Central America is expected to be greater than the percentage increase in U.S. production. The FAO projections indicate the supplies available for export in Central America in 1980 will be 70 percent above 1970, while the Economic Research Service, USDA, expects U.S. beef production in 1980 to be about 32 percent above 1970.

In terms of actual quantities the increase in Central America's supplies of beef available for export between 1970 and 1980 represents very little increase in competition for U.S. producers. While the supplies of beef available for export in Central America are expected to increase by 138 million pounds, U.S. production of beef and veal is expected to increase by about 7 billion pounds between 1970 and 1980.

Base period and commitments under voluntary restraint programs for Central American countries to United States subject to Meat Import Law (PL 88-482), for calendar years, average 1959-63, annual 1968-72

Country	Base period 1959-63	Commitments under voluntary restraint programs									
		1968	1969		1970			1971		1972[1]
			Original	Revised	Original	First	Second	Original	Revised	Original
	1,000 pounds	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
Guatemala	28,863	20.5	21.4	21.88	22.3	23.2	23.2	23.6	25.7	25.3
Honduras	29,111	13.5	14.1	14.10	14.7	15.3	15.3	15.6	17.0	16.7
Nicaragua	70,458	36.0	37.6	38.45	39.3	41.0	41.0	41.8	45.5	44.8
Costa Rica	56,949	32.0	33.4	34.16	34.9	36.3	36.3	37.1	40.4	39.8
Panama	1,440	5.0	5.2	5.32	5.4	5.6	5.6	5.7	1.7	6.1
El Salvador	0	0	0	0	0	0	0	0	0	3.0
Belize	0	0	0	0	0	0	0	0	0	0
Total Central America	186,821	107.0	111.7	113.9	116.6	121.4	121.4	123,8	130.3	135.7
Total other countries under restraint program	3,423,261	917.6	925.4	947.6	1,023.4	1,038.6	1,038.6	1,036.2	1,029.7	1,104.3
Grand total	3,610,082	1,034.6	1,037.1	1,061.5	1,140.0	1,160.0	1,160.0	1,160.0	1,160.0	1,240.0
	Percentage share									
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Central America	5.2	10.3	10.8	10.7	10.2	10.5	10.5	10.7	11.2	10.9
Other countries	94.8	89.7	89.2	89.3	89.8	89.5	89.5	89.3	88.8	89.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Program suspended June 26,1972, for remainder of calendar year.

Beef and veal, total: U.S. imports from specified Central American countries, product weight, average 1959-63, annual 1964-72

Period	Guatemala	Honduras	Nicaragua	Costa Rica	Panama	El Salvador	Total
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
1959-63	5,801	5,825	14,157	11,434	288	0	37,505
1964	11,832	8,572	23,566	17,662	55	0	61,687
1965	9,556	10,715	18,400	10,310	58	0	49,039
1966	12,903	13,788	24,248	12,329	2,246	0	64,514
1967	18,616	12,731	28,525	24,844	3,043	0	87,759
1968	21,561	14,015	37,515	33,891	4,276	0	111,258
1969	23,884	20,813	41,352	35,712	3,393	0	125,154
1970	26,540	26,618	49,999	37,735	5,149	0	141,041
1971	36,278	33,145	52,512	41,025	2,717	0	165,677
1972	36,952	36,673	58,983	50,549	5,013	7,343	195,513
	Beef and veal subject to Meat Import Law (PL 88-482)						
1959-63	5,773	5,822	13,913	11,390	288	0	37,186
1964	11,656	8,545	23,303	17,638	55	0	61,197
1965	9,484	10,714	18,321	10,310	58	0	48,887
1966	12,843	12,788	24,175	12,329	2,246	0	64,381
1967	18,616	12,731	28,294	24,838	3,043	0	87,522
1968	21,561	14,015	36,908	33,891	4,276	0	110,651
1969	23,829	20,813	39,672	35,712	3,393	0	123,419
1970	23,246	15,872	42,329	37,735	5,149	0	124,331
1971	25,968	16,785	43,943	40,884	2,717	0	130,297
1972	32,029	25,726	54,103	50,459	4,910	7,163	174,390
	Beef and veal exempt from Meat Import Law (PL 88-482)						
1959-63	28	3	244	44	0	0	319
1964	176	27	263	24	0	0	490
1965	72	1	79	0	0	0	152
1966	60	0	73	0	0	0	133
1967	0	0	231	6	0	0	237
1968	0	0	607	0	0	0	607
1969	55	0	1,680	0	0	0	1,735
1970	3,294	10,746	7,670	0	0	0	21,710
1971	10,310	16,360	8,569	141	0	0	35,380
1972	4,923	10,946	4,879	90	102	170	21,110

Note: May not add due to rounding.

Source: U.S. Department of Commerce, Bureau of the Census.

U.S. imports of meat subject to Meat Import Law (PL 88-482), by country of origin, base period 1959-63, annual 1968-72

Country of origin	Base period 1959-63	1968	1969	1970	1971	1972
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Guatemala	28,863	21,561	23,829	23,246	25,968	32,028
Honduras	29,111	14,015	20,813	15,872	16,785	25,726
Nicaragua	70,458	36,908	39,672	42,329	43,943	54,103
Costa Rica	56,949	33,891	35,712	37,735	40,884	50,460
Panama	1,440	4,276	3,393	5,149	2,717	4,911
El Salvador	0	0	0	0	0	7,163
Belize	0	0	0	0	0	0
Total Central America	186,821	110,651	123,419	124,331	130,297	174,391
Total other countries under restraint program	3,423,261	89,379	960,718	1,046,269	1,002,341	1,181,074
Grand total	3,610,082	1,001,030	1,084,137	1,170,600	1,132,638	1,355,465
	Percentage share					
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Central America	5.2	11.1	11.4	10.6	11.5	12.9
Other countries	94.8	88.9	88.6	89.4	88.5	87.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

U.S. Department of Commerce, Bureau of the Census.

Breeding cattle: U.S. exports to Central American countries, average 1959-63, annual 1964-72

Country and item	Average 1959-63	1964	1965	1966	1967	1968	1969	1970	1971	1972
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Guatemala:										
Dairy	28	106	93	101	95	256	279	133	228	245
Beef	186	280	412	175	564	288	216	599	377	351
Total	214	386	505	276	659	544	495	732	605	596
Belize:										
Dairy	17	---	---	---	---	---	1	22	---	2
Beef	32	5	16	19	17	2	---	28	44	---
Total	49	5	16	19	17	2	1	50	44	2
Honduras:										
Dairy	30	134	256	40	251	27	113	11	152	162
Beef	163	140	421	---	45	33	202	61	7	15
Total	193	274	677	40	296	60	315	72	159	177
El Salvador:										
Dairy	69	---	302	152	124	1	10	165	41	251
Beef	42	559	418	285	---	16	33	126	6	109
Total	111	559	720	437	124	17	43	291	47	360
Nicaragua:										
Dairy	18	54	911	68	1	52	74	21	46	---
Beef	257	391	1,271	688	85	30	26	151	41	140
Total	275	445	2,182	756	86	82	100	172	87	140
Costa Rica:										
Dairy	107	124	369	42	99	189	293	164	424	30
Beef	115	175	292	148	109	283	339	631	1,602	1,871
Total	222	299	661	190	208	472	632	795	2,026	1,901
Panama:										
Dairy	11	41	143	---	100	6	2	2	5	---
Beef	113	109	111	199	57	223	17	60	31	282
Total	124	151	254	199	157	229	19	62	36	282
Totals:										
Dairy	280	460	2,074	403	670	531	772	518	896	690
Beef	908	1,659	2,941	1,514	877	875	833	1,656	2,108	2,768
Grand Total	1,188	2,119	5,015	1,917	1,547	1,406	1,605	2,174	3,004	3,458

U.S. Department of Commerce, Bureua of the Census.